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ABSTRACT

Arguing that games which simulate real-world situations and events have proven to be effective educational tools, this paper suggests that they may also offer an added educational dimension to academic library collections. Twenty-five academic libraries were surveyed to determine librarians' perceptions of the academic value of games and simulation materials and their recommendations concerning the purpose, collection, location, and use of games and simulations in academic libraries. The results of the survey indicate that, while more than two-thirds of the responding librarians recognize the educational value of recreational games and consider them to be appropriate academic library materials, only half of them currently include games and simulations in their libraries' collections. A list of the libraries surveyed, a copy of the survey instrument, a list of related Library of Congress subject headings, and 22 references conclude the report. (MAB)

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A PLACE FOR GAMES AND SIMULATIONS IN ACADEMIC LIBRARIES: ARE THEY DIGESTIBLE?

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When my children began classes in the Macomb IL school system last year, I noticed an improvement in their attitude toward school and in their grades. I asked my fourteen-year-old daughter for the reason, and she told me that school here was easier and more fun and that she was learning more. What a dangerously subversive thought, that learning should be "fun!"

By contrast, I cannot forget my professor in my first semester cataloging course giving us thick packets of sheets of photocopied catalog cards to cut out and sort in filing order. The filing rules were challenging, but having to scissor out hundreds of scraps of paper seemed insufferably irrelevant, and I never got past it. (In fairness, that professor was one of the progressive first to use computer-assisted instruction in such a course.)

Should proficiency in tedium be a necessary post-secondary graduation requirement? Or, are there more enjoyable--or at least relevant--forms of instruction and examination which should be pursued as well, or instead? I can remember how Graduate School of Library Science Dean Dr. Herbert Goldhor's students plunged into some of the hypothetical administrative situations he concocted for us.

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Onetime, we were roleplaying entering the directorship of a library whose previous director had left hurriedly and mysteriously. Dr. Goldhor parceled out clues which we used in our attempts to understand and negotiate--with considerable imagination and humor--the library's political jungle.

Simulating real-world situations and events, through roleplaying or more structured models having formalized win-loss standards of success, has proven to be a very effective and satisfying form of instruction. There are now educational simulations and games concerning business, the environment, transportation, history, urban planning, political campaigns, international relations--even concerning library skills and administration.

The use of simulation in crucial sectors of modern society, like military planning and preparedness, has been immortalized in the recent feature film, "Wargames."[1] One historical example of the importance of wargaming was our watershed defeat of the Imperial Japanese Navy in the World War II Battle of Midway on June 4, 1942. A key factor in the Japanese defeat was the interference--cheating--in the planning game by a senior Japanese staff officer.[2]

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[1] Francis B. Kapper, "Wargaming and Crisis Management," Defense 81 (May 1981): 14-26.

[2] Mitsuo Fuchida and Masatake Okumiya, "Testing the Battle Plan," chap. in Midway: The Battle that Doomed Japan (Annapolis MD: United States Naval Institute, 1955) 94-97.

I. The Nature of Games and Simulations

Games and simulations are not necessarily the same. Games are contests having rules and outcome measurements to achieve a specified goal--and thereby "win." Games may be played competing with other players, solitaire, or--an intriguing new emphasis--in cooperation with others.[3]

Simulations are abstracted models of real events and situations -- replicating history, business, Nature, etc. -- to help participants understand those events and situations experientially and practice problem-solving skills therein.

Simulation games are simply games with "plots" based on realistic past, present, or future events and situations.

Roleplaying games are simulations wherein players adopt the characteristics and situations of individual people, historically or hypothetically. Such games can be based on past, present, or future situations in reality or fantasy. This is a more personal version of simulation gaming.

Games and simulation can have various formats. They can can be manual, in the form of boardgames, cardgames, physical/athletic games, situational booklets, etc. They can also be electronic, in the form of arcade games, conventional computer games, etc.

There are also "books of games" containing the instructions and even components of manual and computer games

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[3] Tom Snyder Productions, Inc., Bannercatch (New York: Scholastic, 1984. A cooperative computer game for children.

in conventional book format.

As far as intent, games can be recreational, instructional, or--ideally--both.

Although the game design possibilities offered by computers are limitless, manual games can still have certain unique advantages, such as portability, complete knowledge of the game's organization and mechanics, and tangible components.

II. Academic Values of Games and Simulations

There are two principal academic values of games and simulations: the record of research and analysis and the effectiveness of experiential learning. As a military history simulation boardgame designer, I can personally attest to the amount of research that goes into the design and production of such games. (I will never forget--or forgive--an editor of my game about the WWII Russian Front, Dark Crusade, being allowed by the publisher to use his inaccurate secondary source for the Axis order-of-battle, instead of my primary source.)

Being able to replicate history and demonstrate its hypothetical possibilities--not just describe or analyze it--requires fundamental understanding and accuracy. While a history book author may make and get away with a few outrageous, absurd statements, an historical game designer whose design produces obviously absurd results will hear

about it--at any hour of the day or night. A simulation game designer must be both an artist creating a valid image of reality, as well as a lawyer who can define and delineate his concepts with clear, concise rules. Research, rules innovation and writing, and playtesting are ordeals grueling beyond description.

Just the examining the design of a simulation game can give a researcher new analytic insight into the relative importances and interrelationships of the variables of a given system or event. Of course, actually playing a simulation game is the best way to understand it.

The power of experiential learning has to be seen--or, better yet, experienced--to be understood. Actually having to deal with the decision-making variables--however abstracted--confronting historical or contemporary decision-makers, quickly gives the player/participant a personally involved understanding of key situational and dynamic factors and their interrelationships.

Interestingly, there have been many simulations used for library education and planning. This is true internationally, as well. (Please refer to Appendix D. for sample titles.)

To attest to the academic credibility of simulation and gaming, there are scholarly journals published about them. There is now an archival collection of games and simulations

at the Rochester (NY) Institute of Technology. There are scholarly associations like SAGSET, the Society for Academic Gaming and Simulation in Education and Training in Leicestershire, Great Britain.

IV. Survey/Sample Results and Inferences

Thirteen of twenty-five nationwide academic libraries responded to the survey. (The survey, with raw figures for responses, is in Appendix B.) It was addressed to the libraries' "Collection Development/Acquisitions Librarians."

Responses to the first question indicate general education, vocational training, professional education and training, intellectual development, and character development are all recognized (to varying degrees) as being benefited by the use of games and simulations.

The librarians' preferences as to the location of gaming and simulation materials were diverse. Only one felt they should be integrated into the normal collection. A couple recommended a special collection for games and simulations. A few saw these materials being compatible with the contents of audiovisual collections. One respondent described how his/her library's computer games are included in the special reserve collection of computer software. (Later, in Question 9., four people acknowledged that their library's software collections included games and simulations.)

However, fully five of the librarians would have

committed games and simulations to a special teaching materials/curriculum library--and, presumably, bibliographic oblivion. The principal reason for mainline academic libraries' aversion to games and simulations does seem to be the problem of unconventional and complex formats. Most of the librarians were concerned about the irregular packaging and the number and variety of components. Someone specified his/her concern about problems of storage and servicing.

A couple respondents acknowledged concern about games generally lacking "scholarly intent and content." A couple more were concerned about how collecting games and simulations might be perceived by funding or accreditation authorities. One observed that money for games and simulations would be taken away from other materials.

As to collection purposes, only two respondents saw archival research values in games and simulations. The vast majority would want to see them in actual circulation--as their designers intended, presumably. Two specified the materials' use with future teachers--implying a curriculum laboratory (library) use again.

As to changes of attitude toward games and simulations in response to the survey, most of the respondents indicated no change, of course. (I certainly do appreciate the three people indicating positive shifts, though.) At least I do not seem to have provoked any anti-"fun and games" backlash with my survey.

Reactions to the "optional questions" were intriguing. These questions were posed to probe and provoke the personal opinions of collection development/acquisitions librarians. Three of the librarians declined responding to them.

As a game designer, I was gratified to see that almost all the respondents to Question 11. doubt that complexity is any guarantee of a simulation game's actual realism or educational value. I myself have always believed that a game design's basic assumptions and principles do more to determine its overall efficacy than do its details.

Not surprisingly, a significant number of the respondents to Questions 12. and 13. were concerned about the use of historical and futuristic wargames by elementary and middle school students. This may reflect a rising sense of social concern and responsibility about the effect of war toys on children. How this response can be reconciled with the "freedom to read (or play?)" is a question I leave to others.

For the benefit (and reassurance?) of my colleagues, though, I might mention that throughout his childhood my own son has shared my interest in military/naval history and wargaming--including that oldest of wargames, chess. Like his father, he also loathes/fears the possibility of actual war--albeit more knowledgeably than most.

As to the fantasy and roleplaying game Dungeons and Dragons™, there is significant doubt about its educational

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value but a detectable reluctance to judge its moral effect.

However, it was Questions 2., 3., 5., and 8. which were the basic motive for this paper and which bore out my prior suspicions. Over two-thirds of the responding librarians recognize that even recreational games can have "serious educational value." Indeed, they were unanimous in recognizing "that the research and theory going into the design and production of some games--even popular, recreational games--can be of scholarly caliber and value."(!)

Nonetheless, only two-thirds "consider them to be appropriate academic library materials, generally. Moreover, only half actually include games and simulations in their libraries' collections and current acquisitions.

This is an inexcusable inconsistency. If we recognize the scholarly values of games and simulations, we have a professional obligation to see that these materials are fairly represented in our collections and catalogs--regardless of their unorthodox and/or troublesome formats.

I would like to thank all the collection development/ acquisitions librarians who participated in my survey of them for their sincere, helpful answers and for their professional responsiveness.

V. Recommendations Concerning the Purpose, Collection, Location, and Use of Games and Simulations in Academic Libraries

Following, is a suggested collection development statement regarding games and simulations as library materials:

> Simulations and games are valid forms of educational and research resources. Within the context of the collection needs of their subject areas, they should be given fair consideration for acquisition to this library, regardless of any processing and maintenance inconveniences due to their unconventional format.

Consult with department faculties for useful games and simulations used in their disciplines. Scan new game reviews in scholarly journals devoted to games and simulations. Visit toy, hobby, game, stationery, book, and computer software shops to scan their shelves. (Tough duty!)

As to location, I feel that the audiovisual department is the most logical place for these materials. Audiovisual staff routinely develop procedures specific to the disparate formats of the unconventional library materials they maintain. Even locating games and simulations in a curriculum laboratory library is acceptable, as long as they are cataloged into the normal bibliographic database--such as OCLC and/or ILLINET Online.

When cataloging simulations and games, try to include at least one generic, format-oriented subject heading. Games and simulations are few enough in number in the bibliographic databases that such a subject heading can still narrow a

search considerably. Please refer to Appendix D. See also Chapter 12. of the Anglo-American Cataloging Rules.

For the academic purpose of studying a simulation's/game's design and the research that went into it, having these materials available for archival use only is an entirely legitimate purpose. If the educational intent is the general education of undergraduate students in the simulation's/game's subject area, then actual circulation and use of the material should be planned and enabled. Even providing a study and play area for researchers would be helpful.

Whether the material is circulated or not, an inventory list of a simulation's/game's components should be compiled as soon as it is received. Photocopies of key components, such as cardboard pieces, should be made to enable replacement if some items are lost. The game's contents should be cross-checked against the library's inventory list after every usage.

VI. Future Directions

I will be sending out my survey to more libraries, nationwide, and generally broadening my sample. I would also like to contact key accrediting associations to probe and stimulate their opinions of games and simulations on campuses and in academic libraries, specifically.

FURTHER RESOURCES

Allen, Thomas B. War Games: The Secret World of the Creators, Players, and Policy Makers Rehearsing World War III Today. New York: McGraw-Hill, 1987.

Belch, Jean. Contemporary Games: A Directory and Bibliography Covering Games and Play Situations or Simulations Used for Instruction and Training by Schools, Colleges and Universities, Government, Business, and Management. Detroit: Gale Research, 1973-74.

Chuyev, Yu.V. and Yu.B. Mikhaylov. Forecasting in Military Affairs. Soviet Military Thought Series, no. 16. Washington DC: USGPO, 1980.

Dukes, Richard L. and Constance J. Seidner, eds. Learning with Simulations and Games. Beverly Hills CA: Sage, 1978.

Dunnigan, James F. The Complete Wargames Handbook: How to Play, Design, and Find Them. New York: William Morrow, 1980.

Horn, Robert E. and Anne Cleaves, eds. The Guide to Simulations/Games for Education and Training. 4th Edition. Beverly Hills CA: Sage, 1980.

Hyman, Ronald T. Simulation Gaming for Values Education: The Prisoner's Dilemma. University Press, 1978.

Jones, Ken. Designing Your Own Simulations. New York: Methuen, 1985.

Law, Gordon. The Librarianship of Games. Bethesda MD: ERIC, 1976. (ED 136 837)

Megarry, Jacquetta, ed. Perspectives on Academic Gaming & Simulation. New York: Nichols, 1978.

Husen, Torsten and T. Neville Postlethwaite, eds. The International Encyclopedia of Education Research and Studies. New York: Pergamon, 1985. "Simulation and Gaming in Education," by Jacquetta Megarry.

NOTES ABOUT THE AUTHOR

After fifteen years in Alaska, Mr. Coatney has returned to the Midwest. He has had six military history boardgames published, including one in ERIC--ED 287 786. He is the sponsor of the Western Illinois University Chess, Etc. Club.

Appendix A.

LIBRARIES RESPONDING TO SURVEY

Augustana College, Rock Island IL

Blackhawk Community College, Moline IL

Chicago State University, Chicago IL

Illinois State University, Normal IL

Oberlin University, Oberlin OH

Pennsylvania State University, State College PA

Sangamon State University, Springfield IL

Southern Illinois University, Carbondale IL

United States Military Academy, West Point NY

United States Naval Academy, Annapolis MD

University of Illinois, Chicago IL

University of Washington, Seattle WA

Western Illinois University, Macomb IL

LIBRARIES NOT RESPONDING TO SURVEY

DePaul University, IL
Duke University, NC
Eastern Illinois University, IL
Georgia Institute of Technology
Governors State University, IL
Harvard University, MA
Knox College, IL
Northeastern Illinois University, IL
Northern Illinois University, IL
Stanford University, CA
University of Chicago, IL
University of Illinois, Urbana, IL
University of Iowa

APPENDIX B.

(Please reply as soon as possible using enclosed return envelope.)

13 RESPONSES

GAMES AND SIMULATIONS IN ACADEMIC LIBRARIES

SURVEY QUESTIONS*

1. Do you think that games and simulations are useful in
   (10) General education
   (8) Vocational training
   (11) Professional education and training
   (10) Intellectual development
   (6) Character development
   ( ) Other:

2. Do you think that some commercially published recreational boardgames, cardgames, and/or computer games can have serious educational value?
   (10) Yes (3) No

3. Does your academic library include games and simulations in its collections and current acquisitions?
   (7) Yes (6) No

4. If so, where are your library's games and simulations located (or, if not, where would or should they be)?
   (1) Put in bookshelf containers and shelved with the general library book collection.
   (3) Included with the library audiovisual collection.
   (2) In a special games and simulations collection.
   ( ) Other:

   1 Computer software collection (in Reserve Room).
   5 Teaching materials/curriculum library.

5. Whether or not your library has or collects games and simulations, do you consider them to be appropriate academic library materials, generally?
   (8) Yes (4) No (1) ?

6. Do you think that the research and theory going into the design and production of some games -- even popular, recreational games -- can be of scholarly caliber and value?
   (13) Yes (0) No

* Survey intentions and definitions are on the last page.

7. What do you see as negative concerns about maintaining a collection of games and simulations in the library?

(10) Varying sizes and shapes of game packaging.
(11) Number and variety of easily lost (or stolen) game pieces and parts.
(2) Lack of scholarly intent and content which characterizes games and simulations, generally.
(2) Possible perception by accreditation/funding/etc. authorities of the library having frivolous, unscholarly materials/collections.
(4) More appropriate to public and school libraries.
( ) Other:
2 Takes money from other collection areas.
1 Difficulty of determining "worthwhile" games and simulations.
1 Finding a place to store and service them.

8. Whether or not your library has or collects games and simulations at all, which following collection purpose(s) for them would you want:

(2) Having them for an archival record of their research and design. Presumably, such materials should remain uncirculated and unused/unplayed.
(9) Having them available for direct circulation and/or onsite use (as is their intended educational or recreational purpose).
(2) Other:
Introducing future teachers to them.

9. Do you have available -- via direct circulation, onsite use, or a campus library network -- a library collection of computer software? (7) Yes (6) No

If so, do you include games and simulations in your computer software selection?
(4) Yes (4) No

10. Has this survey led you to clarify or reconsider in any way your attitudes about the place/appropriateness of games and simulations in an academic library?

(9) No
(3) Yes, my attitudes toward games and simulations as academic library materials are now more positive.
( ) Yes, but my attitudes toward games and simulations as academic library materials are now more skeptical.
(1) Other: Need to know more about actual academic usefulness in teaching serious subjects.

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10 RESPONSES

OPTIONAL QUESTIONS:

11. Do you think that, as a general rule, the more complex a simulation game is the greater is its realism and educational value?

(1) Yes (9) No

12. Do you consider historical "wargames" -- depicting historical battles and wars -- to be morally/ethically/ developmentally suitable or acceptable for

Elementary students?	(5) Yes	(4) No	(1) No response
Middle school students?	(5) Yes	(4) No	(1) No response
High school students?	(7) Yes	(2) No	(1) No response
Undergraduate students?	(9) Yes	( ) No	(1) No response
Graduate students?	(9) Yes	( ) No	(1) No response

13. Do you consider futuristic "wargames" -- depicting possible future battles and wars -- to be morally/ ethically/ developmentally suitable/acceptable for

Elementary students?	(3) Yes	(5) No	(1) No response
Middle school students?	(4) Yes	(5) No	(1) No response
High school students?	(6) Yes	(3) No	(1) No response
Undergraduate students?	(8) Yes	(0) No	(2) No response
Graduate students?	(8) Yes	(0) No	(2) No response

14. Do you think that fantasy roleplaying games like Dungeons and Dragons™ have educational value for

Elementary students?	(3) Yes	(5) No	(2) No response
Middle school students?	(4) Yes	(4) No	(2) No response
High school students?	(4) Yes	(4) No	(2) No response
Undergraduate students?	(4) Yes	(4) No	(2) No response
Graduate students?	(3) Yes	(5) No	(2) No response

15. Do you think that fantasy roleplaying games like Dungeons and Dragons™ are morally/ethically/developmentally suitable or acceptable for

Elementary students?	(4) Yes	(2) No	(4) No response
Middle school students?	(4) Yes	(2) No	(4) No response
High school students?	(4) Yes	(2) No	(4) No response
Undergraduate students?	(4) Yes	(2) No	(4) No response
Graduate students?	(4) Yes	(2) No	(4) No response

16. Anything you would like to add:

Games excluded because of physical limitations. Lack of software coll. dev. policy. A mil. institution, we use wargames. Our Aerospace Dept. uses simulations.
14.&15.: Do not know this game.
12.-15.: Need more info. on academic role/potential of these games before intel. response. Believe me, I am hardly an unbiased respondent. (Librarian's husband is wargames dealer.)

Thank you for your time and help. I will be presenting the results in my paper, "A Place for Games and Simulations in Academic Libraries: Are They Digestible?" at the College and Research Libraries Forum, 8-9 Nov 90 in Champaign-Urbana.

APPENDIX C.

SELECTED GAMES- AND SIMULATIONS-RELATED LIBRARY OF CONGRESS SUBJECT HEADINGS (13th Edition)

Business--Mathematical models
Computer wargames
Education--Simulation methods
Educational games
Games--Soviet Union
  etc.
Games for campers
Games in art education
Games in Buddhist education
Games in Christian education
Games in mathematics education
Games in religious education
Games of chance (Mathematics)
Games of strategy (Mathematics)
  UF Games with rational pay-off
      (Mathematics)
Games, Primitive
Games, Primitive--Australia
  etc.
Management games
Rhyming games
Simulation games in education
  Also "--Simulation games" as a subheading,
    for example,
      Aging--Simulation games
      Gerontology--Simulation games
      Rural poor--Simulation games
Simulation methods
  Also "--Simulation methods" as a subheading,
    for example,
      Education--Simulation methods
War games
War games, Naval

I would also recommend:

Military history--Simulation games

and

Naval history--Simulation games

if you want to add the concept of format to subject heading selection for games themselves.

APPENDIX D.

LIBRARY-RELATED ARTICLES ABOUT GAMES AND SIMULATIONS

American Library Association. "Sourciana: Gaming, Library-style." American Libraries (July/August 1990): 684.

Oxford's Bodleian Library has published a bibliographic research game for six players.

Coons, Bill. "INFOQUEST: A Research Strategy Approach to Locating Information." Bethesda MD: ERIC, 1983. (ED 237 101)

Gavryck, J.A. "The SUNY Librarians' Faculty Status Game." Journal of Academic Librarianship 1 (July 1975): 11-13.

Griffen, Agnes M. "Potential Roles of the Public Library in the Local Emergency Management Program: A Simulation." Special Libraries 78 (Spring 1987): 122-30.

Koelewyn, Arie C. and Katherine Corby. "Citation: A Library Instruction Computer Game." RQ 22 (Winter 1982): 171-74.

Mahood, Wayne. "The Censorship 'Game'." Social Studies 74 (May-June 1983): 133-36.

Morskaya, Z.V. "'Igraem' v obsluzhivanie." [Playing at Library Service.] Nauchnye i Teknicheskie Biblioteki SSSR 7 (1987): 19-20.

O'Connor, Joseph E. "Index-in-Dice." Audiovisual Instruction 21 (1976): 40-42.

Olsen, Linda D. "Let's Redesign the Library." Audiovisual Instruction 23 (1978): 41-2.

Yoshida, Norman J. In Pursuit of Trivia--Game Theory and Research Skills. Bethesda MD: ERIC, 1985. (ED 267 623)